

## Claims

What is claimed is:

1. A color filter manufacturing method for a plastic  
5 substrate, comprising the steps of:  
    providing a plastic substrate with an extrusion  
    method, the substrate has multiple grooves with at  
    least one surface containing photo-resists;  
    filling the primary colors of red R, green G, blue  
10 B into the groove of the plastic substrate by  
    jetting to form the primary colors of R, G, B;  
    jetting the black photo-resist liquids by the  
    inkjet printing method and forming a black  
    photo-resist; and  
15 covering a plane passivation layer on the top  
    surface of the plastic substrate.
2. The color filter manufacturing method according  
to claim 1, wherein the surface of the plastic  
20 substrate around the groove can be a smooth  
    surface.
3. The color filter manufacturing method according  
to claim 1, wherein the surface of the plastic

substrate around the groove can be a rough surface.

4. The color filter manufacturing method according  
5 to claim 1, wherein the black photo-resist is formed on the surface of the plastic substrate apart from the space of R, G, B photo-resists.

5. The color filter manufacturing method according  
10 to claim 1, wherein the black photo-resist is formed on the pre-set groove of the bottom plastic substrate. The position of the groove and the groove of R. G. B. photo-resists are staggered.

15 6. The color filter manufacturing method according to claim 1, wherein the groove with R, G, and B photo-resists is with a plane surface.

7. The color filter manufacturing method according  
20 to claim 1, wherein the groove with R, G, and B photo-resists is with a lumpy surface.

8. A color filter manufacturing method for a plastic substrate, comprising the steps of:

providing a plastic substrate with an extrusion method, the substrate has multiple grooves with at least one surface containing photo-resists;

filling the primary colors of red R, green G,  
5 blue B into the groove of the plastic substrate by jetting to form the primary colors of R, G, B; and

covering a plane passivation layer on the top surface of the plastic substrate.

10 9. The color filter manufacturing method according to claim 8, wherein the surface of the plastic substrate around the groove can be a smooth surface.

15 10. The color filter manufacturing method according to claim 8, wherein the surface of the plastic substrate around the groove can be a rough surface.

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